

REMARKS

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested. It is respectfully requested that the amendment of claim 11 be entered under Rule 116 in that it overcomes the rejections and places this application in condition for allowance.

Claim Status/Amendment

Claims 11-20 remain pending in this application.

In this response, claim 11 has been amended to call for the electromagnetic loop to be connected to a detection circuit and forming a resonant circuit tuned to the input capacitance of the detection circuit, such that motion of a vehicle over the conducting cover causes the generation of an electrical signal by the resonant circuit which has a peak height that is a function of the speed and weight parameters of the vehicle, and that the sensor is calibrated so as to determine the weight of a vehicle from the measured peak height of the electrical signal generated by the resonant circuit and from the speed of the vehicle measured using the at least one speed measurement sensor.

Support for the amendment to claim 11 can be found, for instance, at page 3, lines 22 to 28; page 4, lines 4 to 13; and page 6, lines 21 to 25.

Rejections under 35 USC § 103

The Examiner has rejected claims 11 to 20 under 35 USC § 103(a) as being unpatentable over Muhs et al. in view of Jarder et al. In particular the Examiner has argued that it would be obvious to substitute an electromagnetic loop sensor described in Jarder et al. for the fiber-optic pressure sensor described in Muhs et al. to produce the claimed invention. This rejection is respectfully traversed.

The Examiner's rejection under 35 USC 103(a) is considered moot in light of the amendments that have been proposed in connection with claim 11.

Muhs et al. describes apparatus for weighing a vehicle in motion, in which weight is measured based upon the deformation of a network of optical fibers of a fiber-optic pressure

sensor as a vehicle passes over the optical fibers. The fiber optic sensors are connected to an optoelectronic interface via a light receiver and a photodetector preamplifier (column 10, lines 56 to 68). The light attenuation through the optical fibers varies as the force applied to the sensor varies (column 5, lines 27 to 45), and that variation in attenuation is measured at the interface, and indicative of the weight applied to the sensor is provided (column 10, lines 62 to 68).

There is no disclosure in Muhs et al. of the new features of claim 11 of connecting an electromagnetic loop to a detection circuit and forming a resonant circuit tuned to the input capacitance of the detection circuit such that motion of a vehicle over a conducting cover causes the generation of an electrical signal having a peak height that is a function of the speed and weight parameters of the vehicle, and the sensor being calibrated so as to determine the weight of a vehicle from the measured peak height and from the speed of the vehicle measured using the at least one speed measurement sensor.

As amended, the claimed subject matter provides a method of enabling dynamic weight measurement of a moving vehicle to be obtained using an electromagnetic loop sensor, whilst taking into account the effects of the speed of the vehicle on the electrical signals generated by the electromagnetic loop sensor.

Jarder et al. discloses the use of electromagnetic loop sensors. In particular, Jarder et al. discloses a pressure sensitive mat including a conducting loop (Figures 4a and 4b) for use as "*... an impulse transmitter for the automatic opening of doors or the starting of escalators ...*" and "*... also as an alarm transmitter or the like.*"

However, Jader et al. is not concerned with dynamic weight measurements of a moving vehicle, and is predominantly concerned with static weight measurements to determine the presence of an object, for instance a person, and operation of a mechanical device in response to that presence.

There is no suggestion in Jarder et al. of forming a resonant circuit tuned to the input capacitance of the detection circuit such that motion of a vehicle over the conducting cover causes the generation of an electrical signal having a peak height that is a function of the speed and weight parameters of the vehicle, as required by claim 11. There is also no suggestion in

Jarder et al. of the sensor being calibrated so as to determine the weight of a vehicle from the measured peak height and from the speed of the vehicle measured using the at least one speed measurement sensor.

Instead, according to Jarder et al. at column 3, lines 10 to 21, the number of pulses emitted by an oscillator included in a detection circuit to which the conducting loop is attached are counted for successive time intervals, or a fixed frequency is monitored for a time-interval. Different counted numbers of pulses or time-intervals of different lengths cause mechanical operation of the device. The methods disclosed in Jarder et al. are entirely unsuitable for measurement of the weight of a moving vehicle, and instead are directed merely to the detection of the static presence of an object on the pressure-sensitive mat for a given period of time.

Jarder et al. does not cure the deficiencies of Muhs et al. and neither Jader et al. nor Muhs et al. discloses the new features of claim 11. Neither Jarder et al. nor Muhs et al. provide teaching that would enable/suggest the use of a electromagnetic loop sensor configured to measured dynamically the weight of a moving vehicle.

In order to establish a *prima facie* case of obviousness, it is necessary to show that the hypothetical person of ordinary skill would, without any knowledge of the claimed subject matter and without any inventive activity, be motivated to arrive at the claimed subject matter given the guidance of the cited references when each is fully considered as statutorily required. Therefore, it is submitted that the combination of Muhs et al. and Jader et al. therefore does not teach, or suggest, the apparatus as claimed and it is respectfully submitted that the Examiner's objection under 35 USC 103(a) does not apply to claim 11 as amended.

#### Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the application is in condition for allowance and a Notice to that effect is earnestly solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is

hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in cursive script, reading "Kenneth M. Berner".

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